

integrating the multimedia object descriptions and the entity relation graph descriptions to generate at least one description record to represent content embedded within the multimedia content.

26. (New) The method of claim 25, further comprising generating, from the multimedia object descriptions, multimedia object hierarchy descriptions by object hierarchy construction and extraction processing, for at least one of the multimedia types.

27. (New) The method of claim 25, wherein the multimedia types include at least one of image, audio, video, synthetic, and text.

28. (New) The method of claim 25, wherein the extracting of multimedia objects further comprises:

segmenting each multimedia content into segments including content from at least one of the multimedia types for the multimedia content; and

generating at least one feature description for at least one of the segments by feature extraction and annotation;

wherein the generated multimedia object descriptions comprise the at least one feature description for the at least one segment.

29. (New) The method of claim 28, wherein the segments are selected from the group consisting of local segments and global segments.

30. (New) The method of claim 28, further comprising selecting the at least one feature description from the group consisting of media, semantic and temporal features.

31. (New) The method of claim 30, wherein the media features are further defined by at least one feature description selected from the group consisting of data location, scalable representation and modality transcoding.

32. (New) The method of claim 30, wherein the semantic features are further defined by at least one feature description selected from the group consisting of keywords, who, what object, what action, why, when, where and text annotation.

33. (New) The method of claim 30, wherein the temporal features are further defined by at least one feature description consisting of duration.

34. (New) The method of claim 28, wherein the extracting of multimedia objects further comprises:

generating media object descriptions from the multimedia segment for one of the multimedia types by media object extraction processing;

generating media object hierarchy descriptions from the generated media object descriptions by object hierarchy construction and extraction processing; and

generating media entity relation graph descriptions from the generated media object descriptions by entity relation graph generation processing.

35. (New) The method of claim 34, wherein generating media object descriptions further comprises:

segmenting the content of each multimedia type in the multimedia object into segments within the multimedia object by media segmentation processing; and

generating at least one feature description for at least one of the segments by feature extraction and annotation;

wherein the generated media object descriptions comprise the at least one feature description for the at least one of the segments.

36. (New) The method of claim 35, further comprising the step of selecting the at least one feature description from the group consisting of media, semantic and temporal.

37. (New) The method of claim 35, wherein generating media object hierarchy descriptions generates media object hierarchy descriptions of the media object descriptions based on media feature relationships of media objects represented by the media object descriptions.

38. (New) The method of claim 35, wherein generating media object hierarchy descriptions generates semantic object hierarchy descriptions of the media object descriptions based on semantic feature relationships of media objects represented by the media object descriptions.

39. (New) The method of claim 35, wherein generating media object hierarchy descriptions generates temporal object hierarchy descriptions of the media object descriptions based on temporal feature relationships of media objects represented by the media object descriptions.

40. (New) The method of claim 35, wherein generating media object hierarchy descriptions generates media object hierarchy descriptions of the media object descriptions based on relationships of media objects represented by the media object descriptions, and wherein the relationships are selected from the group consisting of media feature relationships, semantic feature relationships, temporal feature relationships, and spatial feature relationships.

41. (New) The method of claim 35, wherein generating media entity relation graph descriptions generates entity relation graph descriptions of the media object descriptions based on relationships of media objects represented by the media object descriptions, wherein the relationships are selected from the group consisting of media feature relationships, semantic feature relationships, temporal feature relationships and spatial feature relationships.

42. (New) The method of claim 26, wherein generating multimedia object hierarchy descriptions generates multimedia object hierarchy descriptions of the multimedia object descriptions based on media feature relationships of multimedia objects represented by the multimedia object descriptions.

43. (New) The method of claim 26, wherein generating multimedia object hierarchy descriptions generates semantic object hierarchy descriptions of the multimedia object descriptions based on semantic feature relationships of multimedia objects represented by the multimedia object descriptions.

44. (New) The method of claim 26, wherein generating multimedia object hierarchy descriptions generates temporal object hierarchy descriptions of the multimedia object descriptions based on temporal feature relationships of multimedia objects represented by the multimedia object descriptions.

45. (New) The method of claim 26, wherein generating multimedia object hierarchy descriptions generates multimedia object hierarchy descriptions of the multimedia object descriptions based on relationships of multimedia objects represented by the multimedia object descriptions, wherein the relationships are selected from the group consisting of media feature relationships, semantic feature relationships, temporal feature relationships and spatial feature relationships.

46. (New) The method of claim 25, wherein generating entity relation graph descriptions generates the entity relation graph descriptions of the multimedia object descriptions based on relationships of multimedia objects represented by the multimedia object descriptions, wherein the relationships are selected from the group consisting of media feature relationships, semantic feature relationships, temporal feature relationships and spatial feature relationships.

47. (New) The method of claim 25, further comprising receiving and encoding the multimedia object descriptions into encoded description information, and storing the encoded description information as the at least one description record.

48. (New) The method of claim 26, further comprising combining the multimedia object description, the multimedia object hierarchy descriptions, and the entity relation graph description to form a multimedia description, and receiving and encoding the multimedia description into encoded description information, and storing the encoded description information as the at least one description record.

49. (New) The method of claim 47, wherein the encoding comprises binary encoding.

50. (New) The method of claim 48, wherein the encoding comprises binary encoding.